

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY

MEETING OF MAY 5, 1936

A regular meeting of the Society was held on May 5, 1936, in the American Museum of Natural History; President Ruckes in the chair with thirty-five members and forty-six visitors present.

Dr. Klots announced that the next meeting would be given over to a discussion of notes by members and summer collecting plans.

Upon the suggestion that there be a field trip, Dr. Ruckes appointed a committee composed of Messrs. Nicolay and Richard and Miss Clausen to draw up plans for field meetings.

Mr. W. U. Doyle of 176 Undercliff Ave., Edgewater, New Jersey, was duly proposed and elected to membership.

Mr. Proctor plans to spend the summer at Mt. Desert Island. To members of the Society, in the neighborhood during the summer, he very kindly offered to show them around. Members expecting to visit him, however, must let him know in advance.

Mr. Davis, the speaker of the evening was then introduced. The New York Entomological Club, said Mr. Davis, started as Sunday afternoon talks held at the homes of the various members. The Club was founded October 3, 1880, and incorporated in 1893. Mr. Davis read several minutes of the earliest meetings. It was interesting to note that even as early as 1880 there existed serious financial difficulties.

The founders had the unique idea of selecting famous biologists and entomologists as honorary corresponding members. Included in this list were such men as Darwin and Lubbock. The earliest publication was called "Papilio," dedicated to the Lepidoptera, with the idea of eventually adding other topics. A committee was also appointed on nomenclature, the object being to settle doubtful points in connection with synonymy and to arrive at decisions concerning entomological species. Out of the failure of "Papilio," "Entomologica Americana" issued forth.

Mr. Grote, the second oldest member of the Society, said that the club started when New Yorkers rebelled at the idea of going to Brooklyn for meetings. He was president in 1902 and 1903 after having been treasurer for several previous years. Dr. Ditmars, by his permission, was allowed to read his first public paper on the "Snakes of Central Park." Mr. Grote closed his remarks by thanking the Society for being allowed to speak and for being made a life member.

Mr. Bird spoke of the contributions made by the Society and by Mr. Davis to the Society. He instructed Mr. Davis to carry the good wishes of the Society to Mr. Leng.

Mr. Davis regretted very much that the evening was so short that he could not go into more detail. Even though he had to deal with his subject in a superficial way the members found the meeting a most enjoyable one.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF MAY 19, 1936

A regular meeting of the Society was held on May 19, 1936, in the American Museum of Natural History; President Ruckes presiding with nineteen members and eleven visitors present.

The Field Committee reported on plans for a field trip every three weeks during the summer. The schedule of trips was as follows:

May 31	(Sun.)	West Nyack, N. Y.
June 14	(Sun.)	Greenwood Lake, N. J.
July 12	(Sun.)	Lakehurst, N. J.
Aug. 15-16	(Sat.-Sun.)	De Bruce, N. Y.
Sept. 20	(Sun.)	Bear Mt., N. Y.

Dr. Lutz and Dr. Gertsch were ahead of anyone in their spring collecting, having started in on February 5 in Panama. They collected about 17,000 specimens, chiefly Lepidoptera. Dr. Lutz plans to probably continue life history work at Ramsey and also to record the sound of insects. Dr. Gertsch told of the abundance of chiggers or red bugs at Barro Colorado Island. Ticks were also very common.

Doctors Melander and Klots gave a short résumé of some collecting done early this year.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF OCTOBER 6, 1936

A regular meeting of the Society was held on October 6, 1936, in the Roosevelt Memorial; President Ruckes in the chair with twenty-eight members and twenty-four visitors present.

Dr. Ruckes welcomed the Society to its new quarters in the Roosevelt Memorial.

The Field Committee reported that at the Society's first trip of the year twenty members were present. The members were the guests of Mr. Richard. Inclement weather made it impossible for the other scheduled trips to be held.

Dr. Tindale, of the South Australian Museum, was scheduled to speak at the next meeting on "Notes on Insect Collecting in Australia."

Dr. Melander proposed Dr. H. Hagen and Dr. V. Argo, both of the C. C. N. Y. faculty, for membership. Dr. Curran moved that the rules be suspended in order to elect them at once.

Mr. Kisliuk called the attention of the Society to the death of J. W. Folsom.

The speaker of the evening, Dr. Gibson, Dominion Entomologist, was then presented. The Bureau of Entomology in Canada, said Dr. Gibson maintains twenty research laboratories, five or ten temporary field laboratories and ten plant inspection sites. Dr. Gibson explained that insects recognize no

boundary line between Canada and United States. Consequently there is a mutual trading of insect pests beyond the control of either country.

Grasshoppers from U. S. have become so well established 100 miles north of the boundary that effective control measures have to be taken. On the basis of per cent of eggs per area, maps may be made. From these maps the amount of poison necessary to kill the insects the following spring may then be calculated.

Biological control is of vital interest to the Bureau. All of the parasites used are of European origin collected in Hungary and other countries especially for breeding purposes. There are several notable successes in establishing parasites. *Macrocentrus*, a parasite of the peach moth, has become so well established that the peach moth is now seldom found.

The Satin Moth which defoliates trees caused very serious trouble. *Apanoteles* were obtained, bred, and released. This parasite had by 1935 caused infestation of the Satin Moth to completely disappear.

In the Gaspé Peninsula the European sawfly was fast destroying spruce. The parasite *Microplectron* was reared and in 1936, 12,321,426 specimens were liberated. These liberations were usually made in units of 10,000.

Dr. Gibson closed his remarks with a detailed description of the new parasitology laboratory at Bellville. It is the best in the world with all accommodations for complete control of conditions at all times of the year.

At the close of Dr. Gibson's talk there was a general discussion by members.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF OCTOBER 20, 1936

A regular meeting of the Society was held on October 20, 1936, in the Roosevelt Memorial; President Ruckes in the chair with twenty-seven members and fifteen visitors present.

Mr. Henry Bird proposed Professor P. A. Readio, Department of Entomology, Cornell University, Ithaca, N. Y., and Dr. Curran proposed Dr. T. L. Guyton, Sherwin Williams Co., Bound Brook, New Jersey, for membership.

Mr. Engelhardt reminded the members that the next meeting of the Brooklyn Society on November 12 would be in commemoration of the 50th anniversary of its founding.

Dr. Curran made a motion to suspend the by-laws in order to postpone the next meeting because of Election Day.

In view of the fact that there would be no meeting on November 3, Mr. Mutchler proposed suspension of by-laws in order to elect the proposed members to the Society. Acting upon this proposal Professor Readio and Dr. Guyton were elected to membership.

Dr. Ruckes then presented the speaker of the evening, Mr. N. B. Tindale, of the South Australian Museum. From Mr. Tindale the members learned that Australia is troubled by the same insect pests that bother the United States, such as the peach moth. Insects of SW. Australia however are of an archaic nature due to their habit of living in a desert forest.

What is known as Palm Valley is in the midst of sterile desert but in itself it is a gem of fertility. Certain Neuropteroid insects are found only there.

The natives, said Mr. Tindale, are very fond of sweets. In order to obtain this delicacy they take advantage of the way certain ants store honey. They dip up these ants one by one and when they have collected a handful enjoy their rare treat. Children depend largely upon insects for the fat necessary to keep them healthy. They eat from twenty to thirty grubs a day. These grubs may be either toasted or eaten raw.

In times of scarcity of food natives turn up the ground in search of grubs. They also depend upon certain ants that gather grass seed about their mounds. The natives search for these mounds and then use the grain.

Mr. Tindale brought his talk to a close by remarking upon the constancy of association of Australian fauna with that of Patagonia.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF NOVEMBER 17, 1936

A regular meeting of the Society was held on November 17, 1936; President Ruckes in the chair with twenty-four members and seventeen visitors present.

The program committee reported that Dr. Melander would address the Society at the next meeting, his topic being "Behavior of Some Insects and Their Relatives," to be illustrated with motion pictures.

Dr. Ruckes spoke of having visited the Brooklyn Entomological Society on its fiftieth anniversary.

The long-postponed session given over annually to "Notes by Members" was the program of the evening.

Mr. Angell collected at Engelwood Cliffs, N. J. He mentioned *Stratogodes septemtrionus* Csy. and *Nyas cyanesceus* as being of special interest.

Mr. Comstock said he made twenty-two field trips. On these trips he collected 3,000 specimens principally in twelve orders. Collecting was very poor and most of it was done by sweeping.

Dr. Lutz spoke of the experiments he made this summer on the sound recording of insects.

Mr. Davis exhibited several interesting cicadas. The types of these species were presented to the American Museum of Natural History. They are: *Tibicen nigraoalbata*, *Platypedia balli* and *Tibicen curvispinosa*. Some cicadas from the southwestern part of the United States, according to Mr. Davis, are similar to those occurring in Europe. He also told of having received *Peripatus (Peripatoides novae-zealandiae)* and *Heterojapyx novae-zealandiae* and these two specimens have been given to the Staten Island Institute of Arts and Sciences.

Dr. Fox during his summer vacation studied the relative abundance of insect population. He found *Conocephalus ornata* which is usually confined to the Mississippi Basin along the Palisades.

Dr. Melander exhibited pictures taken on the first field trip of the season of the New York Entomological Society. These included both motion and still pictures. Studies of the behavior of insects as well as some of their relatives that have occupied Dr. Melander this summer will be the subject of a talk at the next meeting.

Mr. Olsen who was just back from a trip on the *Zaco* to the South Sea Islands related some of his experiences. The object of the trip was to collect material for a Museum group on pearl diving. The short time available to him for entomological purposes netted few specimens.

Mr. Harry B. Weiss spent the summer collaborating with the New York Public Library resulting in an annotated list of insects affecting books.

Caribidæ seemed to be very scarce this year according to both Mr. Proctor and Mr. Nicolay. Mr. Proctor remarked that there seemed to be fewer Carabidæ each year at Bar Harbor. Mr. Nicolay was of the same opinion concerning the scarcity of Carabidæ in Florida and in the vicinity of Washington.

Dr. Smith spent the summer traveling in Europe. He visited various museums in order to study chrysopids. Of all the museums visited he was most enthusiastic of the Live Insect Exhibit at the Berlin Zoological Gardens.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF DECEMBER 1, 1936

A regular meeting of the Society was held on December 1, 1936; President Ruckes in the chair with twenty-seven members and twenty-seven visitors present.

The program committee reported that Dr. Felt would address the Society at the next meeting on "Insect Enemies of Shade and Ornamental Trees," illustrated with lantern slides.

The following were proposed for active membership in the Society: Mr. Louis A. Tomka, 234 E. 36th Street, New York City; Mr. James H. Maier, 284 10th Ave., New York City, and Mr. Alfred Fenton, Texaco Sulphur Co., Second National Bank, Houston, Texas.

The meeting was then given over to the speaker of the evening, Dr. Melander. Discarding the collecting net Dr. Melander spent the summer in taking insects in their natural surroundings. Most of his work was done in New England. The equipment necessary consists of an abundant supply of patience, a quiet day and lots of sunshine. Displayed upon the screen the members then witnessed insects behaving and misbehaving amid their natural surroundings and in color. Everyone enthusiastically praised Dr. Melander's marvelous motion pictures of insects and some of their relatives.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF DECEMBER 15, 1936

A regular meeting of the Society was held on December 15, 1936; Dr. Ruckes in the chair with eighteen members and fifteen visitors present.

The program committee announced that Dr. A. Glenn Richards, Jr., would speak on January 5, 1937, on "Development and Evolution of Wing Patterns of Lepidoptera."

The following were elected active members of the Society: Mr. Louis Tomka, Mr. James H. Maier and Mr. Alfred Fenton.

Dr. Ruckes appointed a nominating committee composed of Mr. Bell, Mr. Sherman and Mr. Mutchler.

An invitation to members to attend the Science Meetings at Atlantic City was read by Dr. Ruckes.

The members discussed the proposed change of name of the American Association of Economic Entomologists to the American Association of Entomologists. A motion was made and seconded that the President or a representative delegate appointed by him would represent the Society in this matter at the Atlantic City meetings.

Dr. Felt, the speaker of the evening, spoke upon "Insect Enemies of Shade Trees." Dr. Felt's talk was illustrated by slides to show the effects of repeated attacks by insects as well as the characteristic damage done by these insect pests.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF JANUARY 5, 1937

An annual meeting of the Society was held on January 5, 1937; President Ruckes in the chair with twenty-five members and seventeen visitors present.

The program committee reported that Mr. Henry Bird would lead the general discussion at the next meeting with remarks on "The Remarkable Insect Fauna of the Fruit of a Native Fig."

Mr. Mutchler read the report of the nominating committee, as follows:

President: Dr. C. H. Curran

Vice-President: Dr. William Moore

Secretary: Lucy W. Clausen

Treasurer: Paul T. Richard

Librarian: Frank E. Watson

Curator: Andrew J. Mutchler

Executive Committee: William T. Davis, Frank E. Lutz,

William Proctor, Herbert F. Schwarz, Henry Bird

Publication Committee: Harry B. Weiss, H. T. Spieth,

John D. Sherman, Jr., E. L. Bell

Delegate to the New York Academy of Sciences: William T. Davis

Nominations were closed and the secretary was empowered to cast one ballot for the officers as nominated.

Dr. Ruckes then turned the meeting over to the new president, Dr. C. H. Curran.

The resignation of Dr. William Wiegman was accepted with regret.

Dr. Wolfgang VonHagen was proposed for active membership.

Dr. Curran appointed the following committees:

Program: Dr. A. B. Klots, Dr. A. L. Melander, Mr. M.

Kisliuk

Auditing: Dr. A. L. Horsfall, Mr. Frank Johnson, Dr.

Henry Fox

Field: Mr. A. S. Nicolay, Mr. H. Moennich, Mr. H.

Dietrich

Dr. A. Glenn Richards, the speaker of the evening, took the floor. The topic discussed was "Development and Evolution of the Wing Pattern of Lepidoptera." The lepidopterous wing is largely a self-differentiating system independent of the rest of the body. This is proven by transplanting anlagen, by culturing anlagen *in vitro* and by delayed development of wings upon which operations have been performed.

There are two fundamental points in the determination of pattern. First, that there are "sensitive periods" during which the pattern may be modified by external agents and before and after which it is unaffected by these same agents. The different parts of the pattern have sensitive periods at different times so that it is possible to modify one pattern-component without in any way affecting the other.

Second, the pattern is irrevocably fixed by a "determination stream" which flows like a stream across the wing, determining the parts thereof. There are two types of determination streams known: one from the base outward (based on the analysis of intersexes and gynandromorphs), the other from the ventral surface over the central symmetry-field.

There is fundamental similarity between the results of comparative-morphology, developmental physiology and genetical analyses of mixed populations. This work proves that "aberrations" have no status in phylogeny, but are merely *normal* individuals which by chance have developed under not normal conditions.

Seasonal forms are viewed as generally due to diapause versus non-diapause development.

A complete review of this subject is to appear in the June issue of the JOURNAL.

A general discussion followed the talk of the evening.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF JANUARY 19, 1937

A regular meeting of the Society was held on January 19, 1937; President Curran in the chair with twenty-five members and fifteen visitors present.

The Secretary being absent Dr. Ruckes was asked to be secretary *pro tempore*.

The program committee reported that at the next meeting Dr. C. C. Hamilton would address the Society on "The Use of Autogyro and Airplane in

Insect Control." Dr. Hamilton is from the New Jersey State Experiment Station.

Dr. Wolfgang VonHagen was elected to active membership.

The President called attention to the untimely deaths of Professors Crosby and Tillyard. On motion duly seconded and passed Dr. Klots and Dr. Leonard were instructed to write a letter of condolence on behalf of the Society.

Mr. Comstock recalled a series of lectures of which he showed the outline that were given in the American Museum of Natural History in 1894. He also recalled the interesting memorandum of an auction of Lepidoptera conducted by Dr. Ottolengui in 1896. Mr. Davis said that the success of such auctions was due to the leadership of Mrs. Annie Trumbull Slosson and that there were few auctions because the financial condition of the Society improved rapidly and there was no need of raising money by this method.

Mr. Comstock further remarked upon the possible use of paradichlorobenzene as a therapeutic means of controlling ringworm infections.

The program of the evening was opened by Mr. Henry Bird who gave a most interesting talk on the Insect Fauna of the Native American Fig." The remarkably numerous insect fauna of a native fig, *Ficus populina* Willd., of southern Florida was discussed by Mr. Bird and particular attention was drawn to the presence of a *Blastophaga* species seemingly different from *B. grossorum* which was the foreign species introduced into southern California for the caprification of the Smyrna fig. The growing of this variety of the fig in favorable regions of the southwest was equally dependent on this minute wasp to carry pollen from another form bearing staminate flowers, the same as happen in Asia Minor. Its introduction and the working out of its complicated biology was pointed out as a classic of entomology along with that of the *Pronuba* moth and the cross-pollination by the latter of the Yucca plant.

If in the discovery of this Floridian *Blastophaga* it proves that we are dealing with a native species, it might have been of equal assistance to the Californian fig growers, as the imported one. These female wasps are concerned with placing their eggs in the flower of some other fig than that from which they emerged and any in proper condition seem to do so, as long as they are near at hand. Only males without wings and curious creatures, were encountered. These formed but a small fraction of the hundreds of examples emerging from *F. populina* fruit wherein occurred seven other species of Chalcidoidea, and a new gall midge of the genus *Ficiomyia*.

Mr. George Rau gave an excellent summary of the scale insects found in the greenhouses at Bronx Park. His remarks were illustrated by a large collection of living scales which he showed. In 1921 Dr. Morrison found thirty-nine species of scale insects in the greenhouses of the New York Botanical Gardens. During the course of Mr. Rau's collecting he has found twenty-two new records in the same greenhouses, eight of which have been previously recorded by others from different greenhouses in the state. The following are recorded for the first time from the U. S.:

Asterolecanium aureum Bdv.

Chrysomphalus umbonatus Newst.

Kuwanaspis hikosani Kw.

Lecanium decemplex Newst.

In a preliminary survey of the same greenhouses the following parasites of scale insects were found:

Aphytis diaspidea How. on *Diaspis zamiae* Morg.

Aphytis chrysomphali Mercet on *Chrysomphalus umbonatus* Newst.

Aspidiotiphagous citrinus Craw. on *Kuwanaspis hikosani* Kuw.

Coccophagus immaculatus How. on *Ericoccus azaleae* Comst.

Coccophagus lycimnia Walker (*C. lecanii* Fitch) on *Coccus hesperidum* L.

Encyrtus infelix Embleton on *Saissetia hemisphaerica* Targ.

Leptomastidea abnormis Gir. on *Pseudococcus citri* Risso

In addition the thrips *Aleurodothrips fasciapennis* Franklin is predacious upon *Saissetia hemisphaerica* Targ. and *Watsoniella elongata* Watson is commonly found attacking *Odonaspis secreta* Ckll.

Undoubtedly the most serious insect pests of greenhouse plants are the mealy bugs of which six species require control measures.

The Mexican mealybug *Phenacoccus gossypii* is considered by many entomologists the most serious insect found in greenhouses. This insect has gained entrance into a number of greenhouses within the last ten years and may do great damage to Chrysanthemums and other plants.

Rhizoecus falcifer Kunck. attacks the roots of palms. The cottony masses of this insect are mistaken for a fungus growth.

The greenhouse whitefly *Trialeurodes vaporariorum* Westw. is heavily parasitized by *Encarsia formosa* Gahan and the entomogenous *Aegerita webberi* Fawcett.

LUCY W. CLAUSEN, *Secretary.*